

Abstract of the Disclosure

BIARMATURE SOLENOID

5 A solenoid includes first and second armatures disposed on either side of a solenoid core. The core includes first and second sets of legs disposed on opposite sides of a central member. A drive circuit provides a first current level to cause flux to flow in a first path through the core and thereby move the first armature without substantially moving the second armature. The drive
10 circuit can provide a second current level greater than the first current level to saturate the first path and thereby redirect flux into a second core path to move the second armature.

TOP SECRET - DEFENSE

LIST OF ELEMENTS

File: 96-451

5	10	Fuel system
	12	Cylinder
	14	Cylinder head
	16	Injector bore
	18	Fuel passage
10	20	Fuel injector
	22	Fuel supplying apparatus
	24	Fuel pressurization apparatus
	26	Electronic controlling apparatus
	28	Fuel tank
15	30	Fuel supply passage
	32	Transfer pump
	34	Fuel filter
	36	Fuel drain passage
	50	Tappet and plunger assembly
20	52	Cam lobe
	54	Cam shaft
	64	Rocker arm assembly
	66	ECM
	74	Case
25	76	Nozzle portion
	78	Electrical actuator
	80	Spill valve
	81	Spill valve spring
	82	Plunger
30	83	Plunger cavity

84	Check
86	Check spring
88	Direct operated check valve
100	Solenoid
5	102 Stator
	104 Central member
	106a 1 st set of legs
	106b 2 nd set of legs
	108 First armature
10	109 Intermediate member
	110 Second armature
	111 Carrier
	112 1 st magnetic circuit
	114 2 nd magnetic circuit
15	116 Solenoid coil
	118 Drive circuit
	120 Conduit
	122 Waveform
	124 2 nd Waveform
20	128 Spill valve sealing surface
	130 Spill valve seat
	134 Upper DOC sealing surface
	136 Upper DOC valve seat
	138 Lower DOC sealing surface
25	140 Lower DOC valve seat
	142 Plunger passage
	143 Drain passage
	144 2 nd Drain passage
	146 High pressure fuel passage
30	147 High pressure fuel DOC passage

148 Check end passage

150 3rd Drain passage